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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,792	05/22/2001	John K. Shannon	706	8995

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EXAMINER

TSANG FOSTER, SUSY N

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 06/04/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/862,792

Applicant(s)

SHANNON, JOHN K.

Examiner

Susy N Tsang-Foster

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 8-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 20-25 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7 and 20-25, drawn to a method of assembling batteries, classified in class 29, subclass 623.1.
 - II. Claims 8-19, drawn to a method of dispensing metered portions of molten lead, classified in class 164, subclass 140+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention of Group I has separate utility such as generating electricity from the electrochemical cell produced and the invention of Group II has separate utility such as using the process of dispensing molten lead in hot metal typecasting as evidenced by US. Pat. No. 3,780,853. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Peter Jansen on 5/6/2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7 and 20-25. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-19 are

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withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

5. The information disclosure statements filed on 6/7/2001 and 8/16/2001 have been considered by the Examiner.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "210" has been used to designate both the lugs shown in Figures 1, 5, and 8 and the molten lead shown in Figures 2 and 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

7. The abstract of the disclosure is objected to because it is longer than 150 words.

Correction is required. See MPEP § 608.01(b).

8. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

9. The disclosure is objected to because of the following informalities:

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On page 11, line 4, "shuttle plate 76" should be "shuttle plate 48".

Throughout the specification, the reference number "210" was used to designate the lugs (see Figure 1) and the molten lead 210 (see Figure 2).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 2, 5, 6, and 20-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is indefinite because it recites the limitation "said heater body" in lines 3-4.

There is insufficient antecedent basis for this limitation in the claim.

In claims 5 and 23, the limitation "in a dispensing" is indefinite because it is unclear what dispensing modifies.

In claim 20, the limitation "protecting molten lead inside a lead dispenser/heater unit from air by flooding all exposed areas with an inert gas" is indefinite because it is unclear what areas are being referred to. For example, are the exposed areas those of the lead dispenser/heater unit or those of the molten lead?

Claims depending from claims rejected under 35 USC 112, second paragraph are also rejected for the same.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shannon et al. (US 5,885,731).

See abstract; Figures 1 and 4; col. 3, lines 34-40; col. 3, line 65 to col. 4, line 7; col. 4, lines 52-67; col. 5, lines 1-20; col. 6, lines 56-64; and col. 8, lines 21-25 of the reference.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2, 4, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon et al. (US 5,885,731) in view of EP 583021 A.

Shannon et al. disclose all the limitations of claims 2, 4, and 20-22 (see above paragraph and abstract; Figures 1 and 4; col. 3, lines 34-40; col. 3, line 65 to col. 4, line 7; col. 4, lines 52-67; col. 5, lines 1-20; col. 6, lines 56-64; and col. 8, lines 21-25 of the reference) except that the molten lead inside dispenser /heater unit is protected from air by flooding all exposed areas of

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the molten lead with an inert gas inside a molten lead dispensing unit, and replenishing a reservoir of molten lead in the lead dispenser/heater unit with a portion of a strip of lead.

EP 583021 A1 teaches flooding (blanketing) all exposed areas of the molten lead with an inert gas (non-oxidizing gas) to prevent oxidation of the molten lead (col. 4, lines 16-45) inside the molten lead dispensing/heater unit (arc-melting and dispensing device) and replenishing a reservoir of molten lead in the lead dispense/heater unit with a portion of a strip of lead (col. 4, lines 16-24) that is fed into the heater (arc) at a rate commensurate with the rate at which the dispensing means traverse the mould so as to provide a substantially continuous stream of superheated, substantially oxide-free melt sufficient to melt and encompass the lugs in the mould by the time the dispensing means reaches the end thereof.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to flood all exposed areas of the molten lead in the dispenser/heater unit of Shannon et al. with an inert gas because this step prevents oxidation of the molten lead in the dispenser/heater unit.

It would have also been obvious to one of ordinary skill in the art at the time the invention was made to replenish a reservoir of molten lead in the lead dispense/heater unit with a portion of a strip of lead because a strip of lead can be efficiently and conveniently fed into the heater (arc) at a rate commensurate with the rate at which the dispensing means traverse the mould so as to provide a substantially continuous stream of superheated, substantially oxide-free melt sufficient to melt and encompass the lugs in the mould by the time the dispensing means reaches the end thereof.

Allowable Subject Matter

16. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. Claims 5, 6, and 23-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eberle et al. (US 5,505,744) disclose casting straps and terminals on lugs of storage batteries using a casting mold and does not disclose, teach, or suggest that the casting mold is a battery cover (see abstract).

19. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Thursday from 9:30 AM to 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

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The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9310 for regular communications and (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/01 June 2003

Amy Isany Foster